Appendix A. CSMS Capacity and Performance Characteristics

This appendix contains the CSMS (ISS, CSS, and MSS) capacity and performance characteristics tables. Requirements in the main body of the document refer to this appendix. Note that this appendix is equivalent to Appendix E for the SDPS segment.

A.1 Site Hardware Capacity and Performance Parameters

Note: These tables are based on the Feb 7, 1996 technical baseline as defined in Document 210-TP-001-006. The values represent minimal Release characteristics, unadjusted for SMC-0300 and SMC-0310 growth requirements.

Table A-1. Release A Analysis of CSMS Hardware Capacity and Performance Characteristics

Release A Best Case Analysis	CPU MIPS	Primary Data Storage, MBytes
GSFC SMC - MSS/CSS	136	7,570
GSFC LSM - MSS/CSS	117	6,351
EDC LSM - MSS/CSS	117	6,351
LaRC LSM - MSS/CSS	119	6,777
MSFC LSM - MSS/CSS	117	6,319
Bulletin Board - CSS	115	1,524
Mgmt. Wks - MSS	16	361

Table A-2. Release B Analysis Projections of CSMS Hardware Capacity and Performance Characteristics

Release B Best Case Analysis	CPU MIPS	Primary Data Storage, MBytes
GSFC SMC - MSS/CSS	**157**	**364,710**
GSFC LSM - MSS/CSS	**164**	**168,915**
EDC LSM - MSS/CSS	**160**	**55,089**
LaRC LSM - MSS/CSS	**164**	**24,039**
NSIDC LSM - MSS/CSS	**159**	**25,220**
ORNL LSM - MSS/CSS	**159**	**11,552**
JPL LSM - MSS/CSS	**159**	**13,335**
ASF LSM - MSS/CSS	**159**	**11,972**
Mgmt. Wks - MSS	**110**	**4,000**

Bulletin Board - CSS	**50**	**2,000**

A.2 DAAC Network Data Flows for Release B

The following table contains estimated data flows for each of the Release B DAACs. These data flows are obtained from static modeling, using the February 1996 baseline data from the AHWGP for epoch k (3Q99). Data from the document "Communications Requirements for the ECS Project" (220-CD-001-003) is also used to provide estimates of DAAC-DAAC processing flows and user flows. The data rates in the table are in Mbps, and represent 24-hour average data flows with no overhead.

Table A-3. Network Data Flow Estimates for Release B (in Mbps)

DAAC Site	Ingest to Working Storage	Working Storage Server to Processing	Working Storage Server to/from FSMS Server	Working Storage Server to Distribution Server	ACM Server to/from other DAACs	Data to/from Users
LaRC	3.4	50.3	117.4	24.7	9.9	14.7
GSFC	6.5	271.2(1)	408.8	38.7	17.0	34.4
EDC	16.8(2)	466.0	157.6	36.5	12.0	35.2
JPL	(3)	2.5	(3)	14.4	<0.1	1.3
NSIDC	(3)	4.2	(3)	4.7	0.3	1.5
ORNL	<0.1(4)	(3)	(3)	(3)	<0.1	4.4
ASF	(3)	10.9(5)	(3)	4.1	<0.1	3.4

(1) Includes DAO processing data.

(2) Includes Landsat-7 Ingest data.

(3) Flow not appilcable to the DAAC.

(4) Metadata only from ORNL Archive

(5) ASF Processing data.

A.3 Service Performance Response Times by CSMS Subsystem

Please refer to Table E-8.1 and E-8.2 (last two columns) in Appendix E of this document respectively for the Release A and Release B Service Performance Response Times.